Medicare Quality Improvement Organization for Indiana
Contract 500-02-IN03, Modification Number IN0015

Hospital Leadership and Systems Improvement Special Study

Final Report

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EXECUTIVE SUMMARY

The Hospital Leadership and Systems Improvement Special Study (HLSI) focused on preparing the Medicare Quality Improvement Organizations (QIOs) for the 8th Statement of Work (SoW), Task 1c1 (Hospital). Specifically, it addresses the Centers for Medicare & Medicaid Services (CMS) initiative on improving patient safety during inpatient stays at hospitals and improving accessibility to care. This initiative emphasizes the increased implementation and use of health information technology (HIT) by hospitals and also addresses the industry-wide need for transformational change.

This Special Study focuses on three specific forms of HIT which are Computerized Physician Order Entry (CPOE), Bar Code-Enabled Point-of-Care, and Telehealth/Telemedicine. It also emphasizes the importance of transformational change and workforce retention as two key elements to the successful implementation of HIT by hospitals, regardless of whether the hospital is an urban medical center or a rural Critical Access Hospital.

Health Care Excel (HCE), the Indiana Medicare Quality Improvement Organization (QIO), formed an internal team and, along with the help of a distinguished Technical Expert Panel (TEP), successfully completed this Special Study within the contractually defined timeline and budget. This included, among other things, the following accomplishments.

- A State of the Art Report
- An HIT Market Survey
- Development and distribution of a comprehensive HLSI Toolkit for all QIOs
- Planning and producing three national meetings for all QIOs

These tasks were completed prior to the August 1, 2005, start date for the 8th SoW. These tasks allowed the QIOs to be completely prepared for Task 1c1, in the area of HIT

In addition, presentations were made at the Tri-Regional Conference in June 2005, and the QualityNet Conference in September 2005, where HLSI project updates and scoring details were presented, and interaction with the QIOs was included. A presentation also was given at the annual AHQA Conference which provided education to QIOs on this Special Study.

This Final Report describes the methods used, documents prepared, and the results of the defined contractual deliverables. Many of the documents and sections of the Toolkit have been posted on the MedQIC Web site at www.medqic.org.

INTRODUCTION

The HLSI Special Study is focused on preparing the Medicare QIOs for the 8th SoW. Specifically, it is to address the CMS initiative on improving patient safety during inpatient stays at hospitals and improving accessibility to care. This initiative emphasizes the increased implementation and use of HIT by hospitals and also addresses the importance of an industry-wide need for transformational change.

The original HLSI contract was awarded to HCE, the Indiana Medicare QIO, with an initiation date of September 13, 2004. It defined two major areas of HIT (Bar Code technology and CPOE technology), as well as the issue of workforce retention. All of these were to result in a toolkit of documents to be used by the QIOs as they launched into the 8th SoW.

In late October 2004, the HLSI contract was amended by CMS to add Telehealth and Telemedicine as a fourth major area of focus. The amendment added the requirement for HCE to plan and present a total of three national meetings for QIOs as a mechanism to educate and prepare them for this aspect of the upcoming 8th SoW.

As HCE began to work on this study, certain definitions were clarified with CMS to facilitate the discussion of the major topics. For example, the word "Telehealth" is often found in the health care industry literature to be used interchangeably with the word "Telemedicine." Thus, for purposes of this study and report, both of these words will refer to the same technology.

Another clarification regarding Bar Code technology should be noted. This technology has been around for many years and is used extensively in other industries. In hospitals and other health care entities, it is being used successfully for inventory control in certain hospital departments. However, the HLSI study focused on the use of this technology at the point of patient care. Thus, we have called it "Bar Code-Enabled Point-of-Care" (BPOC) technology to emphasize this newer and enhanced use of an established technology.

In the spring of 2005 when CMS released the draft of the 8th SoW, the Workforce Retention area had been eliminated as a contractual requirement for QIOs. However, since HCE had already completed the research and development of the toolkit for this topic, and because workforce issues remain a key challenge for hospitals in today's health care marketplace, HCE included Workforce Retention in the final toolkit document. The importance of workforce retention was emphasized during the national meeting presentations, as it is an integral part to the success of any HIT implementation.

Finally, the amendment to the contract which focused on Telehealth included a component which focused on accessibility of care in rural areas. This aspect was modified during the course of the contract to minimize the rural focus and include both urban and rural hospitals.

METHODOLOGY

Multiple techniques and skills were required to complete this study. HCE formed a team which included HCE employees and consultants. Other people were recruited to help with the study. This included the use of TEPs made up of individuals from around the United States who are recognized as experts in their field. The original TEP included experts in the areas of CPOE, BPOC, and workforce retention. It also included representatives from hospital associations.

A second TEP was formed when Telehealth was added as a focus area. This was necessary since the first TEP had already made significant progress on the other three topics, and the Telehealth area was a newly added component of the Special Study. In addition, certain individuals from the first TEP were asked to serve on the Telehealth TEP because of their expertise and to provide some continuity in the work process.

Experts also were recruited to help with the national meetings. These included speakers and experts to help with the roundtable sessions.

The HCE team performed extensive research and review of medical literature, industry organizations, and interviews with experts. Sources included government health care policy organizations, private health care industry associations, legal experts, Internet resources, and many publications, just to name a few.

Several spreadsheets were created for inclusion in the Toolkit. Articles were written summarizing findings, assessment tools of proven validity were copied (with permission), other tools were developed and field tested, and bibliography summaries were prepared. All of these were included in the Toolkit.

The HLSI Special Study team, along with regular input from the TEPs, prepared the deliverables as defined in the contract and described in this report. This process included regular team meetings with identification of a "point of contact" (POC) for each deliverable. The POC was responsible to the team and the study leader to accomplish the task on time and with a quality product. Once the team approved the product, and with the TEP input, it was submitted to HCE senior leadership for a final quality check. All deliverables were submitted timely to CMS.

SPECIAL STUDY DELIVERABLES

The deliverables are described below.

Original contract

1. Identify and form the TEP
2. Describe the "State of the Art"
3. Develop a Market Survey
4. Develop Toolkit, to include sections on Workforce Retention, CPOE, and BPOC
5. Perform and submit analysis of Field Test Interventions, to include Workforce Retention and HIT functionality
6. Submit a Final Report

Contract amendment

7. Prepare a document that identifies all public money available for Telehealth services
8. Identify a current list of grantees of public and private funding sources for Telehealth services
9. Identify private assistance available for Telehealth
10. Identify associations interested in supporting Telehealth initiatives
11. Identify reimbursable Telehealth services and criteria
12. Describe needed network infrastructure and available vendor sources for Telehealth
13. Organize, schedule, and conduct two learning sessions for QIOs
14. Organize, schedule, and conduct a national meeting for QIOs and early adopters of Telehealth and other HIT
15. Identify and form the TEP for Telehealth services
16. Develop a Toolkit module to focus on Telehealth services, in coordination with the original contract toolkit requirements

1. Identify and form the TEP

The TEP for this study was formed and has given input when needed. There have been a total of nine separate teleconference calls with the TEPs. Prior to each conference call, an agenda and supporting documents were sent to each member of the TEP. Participation was good and the advice and feedback was key to the success of this study.

It is important to note that due to the subsequent addition of the Telehealth focus to the Special Study, there was a second TEP that specifically dealt with that topic. In April 2005, the two TEPs were combined into a single panel to assist with the national meetings.

2. Describe the State of the Art

After the formation of the HLSI team to work on this study at HCE, the first task completed was the "State of the Art." This included a literature review to identify HIT interventions hospitals could implement, while at the same time assessing the burden of implementation. The TEP was very instrumental in helping prepare this summary document. It was submitted to CMS in November 2004.

3. Develop a Market Survey

HCE conducted a market analysis of current vendors and products focusing on CPOE and BPOC technology. A tool was identified which can be used to assess the strengths and weaknesses of vendors and products. A spreadsheet was prepared demonstrating how one can develop a matrix for selecting vendors. These were included in the CPOE and BPOC modules of the Toolkit and were discussed at the national meetings.

4. Develop Toolkit

Initially, this task had two components—Workforce Retention and HIT Function Adoption. The HIT portion was to focus on CPOE and BPOC. After this study began, CMS released the 8th SoW. The 8th SoW does not include workforce retention as a measurable task for QIOs. However, since HCE completed the work on this task and developed a comprehensive Toolkit module dealing with workforce retention, and because this topic is particularly important to the successful adoption of HIT by hospitals, we included it in the final version of the Toolkit.

The final version of the Toolkit includes four modules (binders) that address each of the major topics. These are CPOE, BPOC, Telehealth/Telemedicine (which was the focus of the contract amendment), and Workforce Retention. The TEP was instrumental in the development of the Toolkit modules, with suggestions as to content and review of the final documents.

Final copies of the Toolkit were sent to the CMS Group Task Leaders (GTLs) for both sections of this Special Study. After their review, a teleconference was held for questions and input. Modifications were made and the Toolkit modules were produced in three-ring binders to allow for future updates to be added. Following CMS approval, a hard copy of the Toolkit was made available to each QIO for use during the May learning sessions. The Toolkit was a key focus of those meetings, which will be described further in this report. Each module contained a CD with an electronic version of each document in the respective module.

The QIOs were instructed that each and every document was designed to be used as a separate tool, if so desired. They also could be modified if needed to meet the particular needs of a QIO and their hospital constituents. This approach necessitated some duplication of documents in each module. The modules also included PowerPoint slides

which could be used or modified by QIOs to make presentations to hospitals or other stakeholders as they made the case for HIT.

Many favorable comments were received from the QIOs about the Toolkit. The total Toolkit contents exceed 700 pages of information and a complete set of the Toolkit modules was sent to the GTLs in May 2005. The key documents of the Toolkit can be referenced in electronic form in MedQIC, thereby allowing for easy access by QIOs and CMS. Certain toolkit documents also have been placed on the MedQIC Web site for use by hospitals.

5. Field Test Interventions

This task had three deliverable components. The first was to field test the workforce retention interventions developed in Task 3 of the contract. The second was to field test the IT functionality interventions. The third was to do an analysis and revision of the interventions and submit this to CMS.

The plan for field testing included the use of a focus group approach. Two focus groups occurred in mid-March 2005. One was held in Kentucky and one in Indiana. Both sessions had a total of six hospitals represented, three urban and three rural. The hospitals were represented by Chief Executive Officers and Chief Medical Officers. There also were representatives from the state hospital associations at the focus group meetings. The participants reviewed the tools and Toolkit interventions prior to the meetings. Excellent discussion occurred, and several suggestions for improvement were received. These were incorporated into the final Toolkit documents.

The field testing of the CPOE Readiness Tool, which was developed by Dr. Marc Overhage at the Regenstrief Institute in Indianapolis, Indiana, was completed in July 2005. It was reviewed by the TEP and focus group hospital leaders. The tool was then sent to both rural and urban hospitals in Indiana and Kentucky who had volunteered to review and test the draft tool on site. These were not necessarily the same hospitals that participated in the focus group. Discussions occurred with key hospital leaders. The purpose was to validate the contents, improve the tool, and to develop an analysis methodology.

Upon completion of this process, a number of excellent suggestions were made to improve the final CPOE Readiness Tool. After consultation with Dr. Overhage, a final version was sent to each QIO to include in their toolkit. This document also was distributed at the national meeting in St. Louis, Missouri.

A final summary of the field testing and analysis was prepared and sent to CMS at the end of July 2005.

6. Submit a Final Report

This document fulfills this deliverable requirement.

7. Document All Public Money for Telehealth Services

Research for this subtask included Internet sources, interviews with experts, and input from the TEP. The information obtained was compiled into an Excel spreadsheet to allow ease of sorting and updating.

It is important to note that this information, as well as that in the other subtasks, is a snapshot in time, and thus requires regular review and updates. The Toolkit reminds the QIOs of this and provides them with "Tips" and a "Quick Reference Guide" for accomplishing these updates as they work with their constituent hospitals during the course of the 8th SoW.

8. Identify List of Grantees of Public and Private Funding Sources for Telehealth Services

Research for this subtask included Internet sources, interviews with experts, and input from the TEP. The information obtained was compiled into an Excel spreadsheet to allow ease of sorting and updating.

This information also is a snapshot in time, and thus requires regular review and updates. The Toolkit reminds the QIOs of this and provides them with "Tips" for contacting the grantees as they work with their constituent hospitals during the course of the 8th SoW.

9. Identify Private Assistance Available for Telehealth Services

Research for this subtask included Internet sources, interviews with experts, and input from the TEP. This included not only private funding sources, but also organizations that provide expert assistance. The information obtained was compiled into an Excel spreadsheet to allow ease of sorting and updating.

This information also is a snapshot in time, and thus requires regular review and updates. The Toolkit reminds the QIOs of this and provides them with "Tips" for pursuing private grants as they work with their constituent hospitals during the course of the 8th SoW.

10. Identify Associations that Support Telehealth Initiatives

Research for this subtask included Internet sources, interviews with experts, and input from the TEP. The information obtained was compiled into an Excel spreadsheet to allow ease of sorting and updating.

This information also is a snapshot in time, and thus requires regular review and updates. The Toolkit reminds the QIOs of this.

11. Identify Reimbursable Telehealth Services and Criteria

This particular subtask was more complicated to accomplish since each state has different payers and different criteria when it comes to telehealth services. HCE divided the information into five separate categories of payers. These categories were as follows.

- Medicare
- Medicaid
- Commercial insurance companies
- TRICARE
- Employer-sponsored health coverage

Each of these major payer categories has unique rules and requirements for reimbursement. The Toolkit summarizes these requirements and, where available, this was organized by state to make it easier for the QIOs to use the information. The QIOs were reminded to encourage their constituents to regularly check with their payers and stay informed on this rapidly evolving area of medical care reimbursement.

A "Quick Reference Guide" on reimbursement was included which listed major Web sites with information regarding telehealth and telemedicine reimbursement opportunities. This document contains hyperlinks to a variety of agencies and search engines to allow quick identification of information about reimbursement for these services.

12. Telehealth Network Infrastructure and Vendor Information

Research for this subtask included Internet sources, interviews with experts, and input from the TEP. The vendor information obtained was compiled into an Excel spreadsheet to allow ease of sorting and future updating.

Sample job descriptions for key positions within a telehealth services network were included in the Toolkit. A "Tips" for contacting vendors was prepared and the QIOs were reminded of the excellent resource the Office for Advancement of Telemedicine (OAT) provides. OAT is part of the HRSA (Health Resources and Services Administration). OAT had prepared a manual of more than 400 pages that includes all the necessary elements to put together a telehealth services network and program. It is very comprehensive, can be downloaded from its Web site, and is free of charge.

13. Organize, Schedule, and Conduct Two Learning Sessions

This subtask required HCE to prepare and present two identical sessions, one in the Eastern United States, and one in the Western United States. After some internal discussions at HCE, it was determined that it would be very important for this subtask and the subtask for early adopters, to be completed prior to the beginning of the 8th SoW—before August 1, 2005. These learning sessions were developed and organized with extensive involvement of the TEP. The format of the meetings, the agendas, and the speakers lists were developed and then approved by CMS.

Dates and locations for the two learning session meetings were as follows.

- May 5-6, 2005
  Scottsdale Plaza Resort
  Scottsdale, Arizona

- May 19-20, 2005
  Sheraton Inner Harbor Hotel
  Baltimore, Maryland

Attendance by the QIOs at both meetings was excellent. Each of the meetings had an approximate total of 60 attendees. HCE made a decision to accomplish all of the national meetings by staying within the contracted budget and therefore did not require any registration fee for the QIOs. Therefore, the only expense to the QIOs was the transportation and lodging costs.

Our speakers were well received and the Toolkit was described as "the best ever" seen by QIOs. The QIOs received a CD with each presentation and with an audio record of the meeting. The overall feedback on the meetings was extremely positive.

14. Organize, Schedule, and Conduct A National Meeting for QIOs and Early Adopters

This session was organized with extensive involvement of the TEP. The format of the meeting, the agenda, and the speaker list were developed and then approved by CMS.

This meeting was different from the learning sessions. It was much larger in attendance and was an education and training session using a roundtable, hands-on format. It was held in St. Louis, Missouri, July 21-22, 2005. There was a "networking" social hour the night before on July 20, sponsored by HCE.

The meeting was very successful. There were about 220 attendees who included representatives from almost all of the QIOs, as well as senior leaders from hospitals from each of the attending states. The roundtable sessions were well received with everyone and the evaluations were very positive.

15. Identify and Form a Technical Expert Panel for Telehealth Services

A Technical Expert Panel for Telehealth Services was formed after the original contract was amended to add Telehealth as one of the key technologies to be included in the HLSI Special Study and the Toolkit. This TEP was merged with the original TEP in April 2005, to work together to help with the planning and execution of the national meetings. Please see the above discussion on deliverable number one which describes the TEP and how it was used throughout the course of this project.

16. Develop a Toolkit Module to Focus on Telehealth Services

This subtask added an addition to the original Toolkit requirements. Therefore a separate and complete Toolkit module focusing on Telehealth and Telemedicine was prepared. Please see the above discussion on deliverable number four which describes the Toolkit, its design, and distribution.